

NLR3535AV1

NLG3535AV1

N LB3535AV1

R-G-B LED Datasheet



Elec-Tech International Co., Ltd.

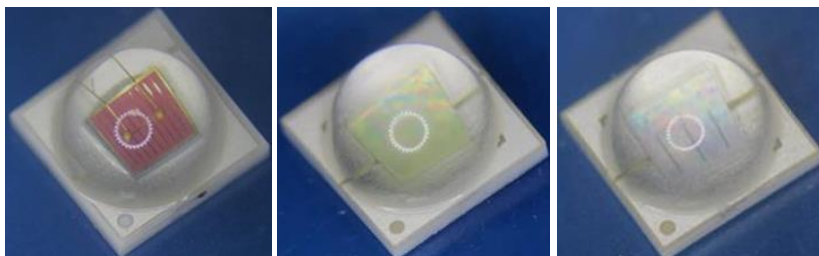
Part No: **NLR/G/B3535**

Version: **V1.0**

Date: **2018-04-27**



NLR/G/B3535



Features

- Single light source flux is high, suitable for optical design .
- Industry leading voltage performance
- Superior optics performance, design for high quality luminous environment .
- Effectively to reduce system cost, and with the optimum solution

Applications

- Outdoor lighting
- Landscap lighting
- Stage lighting
- LED grow light

Specification

Color	Wavelength Range		Flux	Forward voltage		Angle	Thermal resistance
	Min.	Max.	Typ.	Typ.	Max.	Typ.	Typ.
	@ 350 mA		@ 350 mA	@ 350 mA		@ 350 mA	@ 350 mA
Red	615nm	630nm	62lm	2.20V	2.50V	130°	8°C/W
Green	520nm	535nm	170lm	2.85V	3.5V	130°	5°C/W
Blue	450nm	465nm	24lm	2.9V	3.5V	130°	5°C/W

Notes :

- 1.NLR/B/G3535 test current 350mA, test time 20ms, ambient temperature 25°C;
- 2.Beam angle is 50% central light intensity angles .ETI can provide light source documents for ProSourceLighttools\tracepro\ASAP\ZEMAX...ect optical simulation software ;
- 3.Due to measurement technique limitation , there have some errors in product testing , ETI maintains a testing tolerance of $\pm 7\%$ on flux and power measurement, $\pm 1\text{nm}$ on dominant wavelength measurement, ± 0.1 on voltage measurement,

Absolute Maximum Ratings

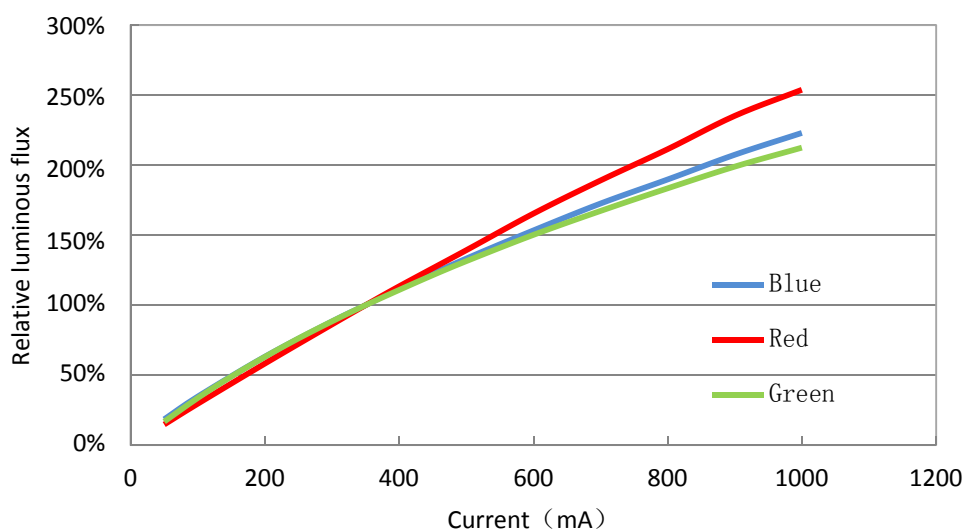
Item	Symbol	Absolute Maximum Rating
Junction temperature (°C)	T_j	150°C
Operation temperature (°C)	T_{op}	-40°C -120°C
Storage temperature(°C)	T_{stg}	-40°C -135°C
Forward current	I_f	1000mA
Pulse forward current	I_{FM}	1250mA
Reverse voltage	V_R	No reverse operation design

Notes:

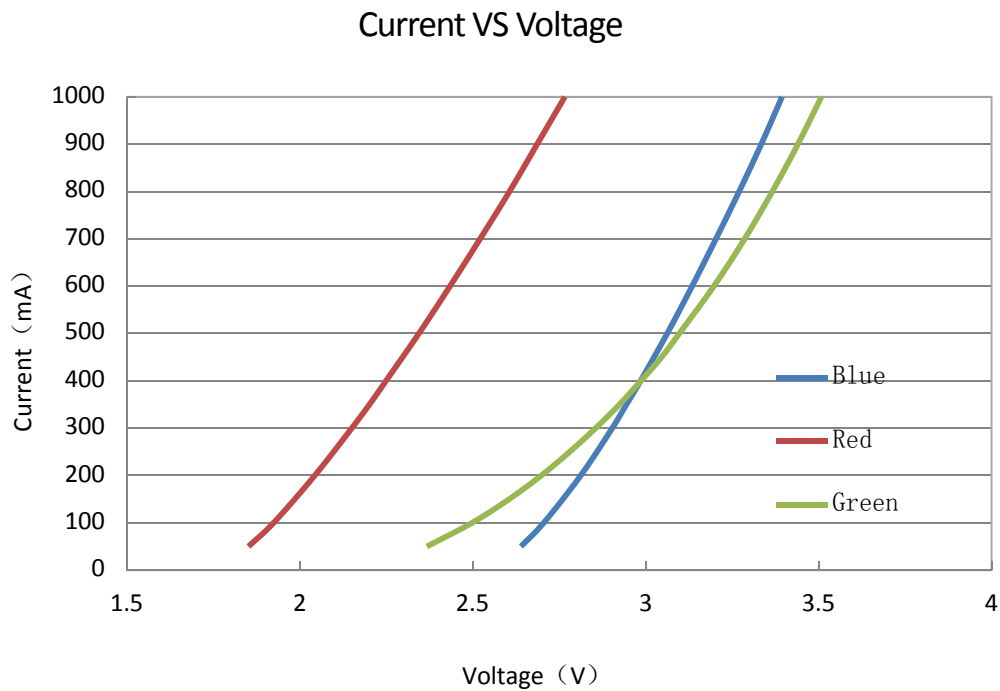
1. Maximum Forward Current and Maximum Pulse Current require the junction temperature to be lower than the rated Junction temperature
2. IFM Condition Pulse width at 50ms and duty cycle at 0.016

Product characteristic curve

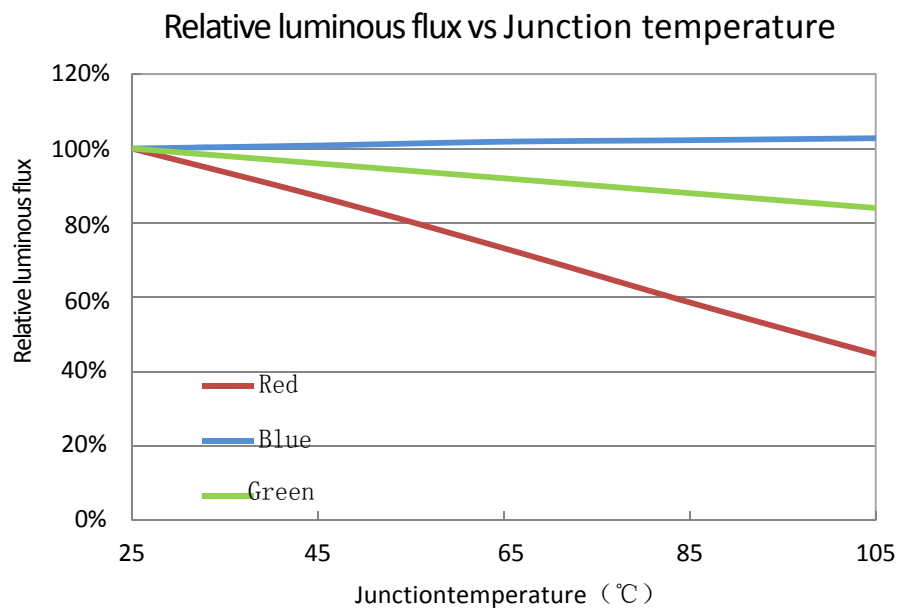
Relative luminous flux VS Current



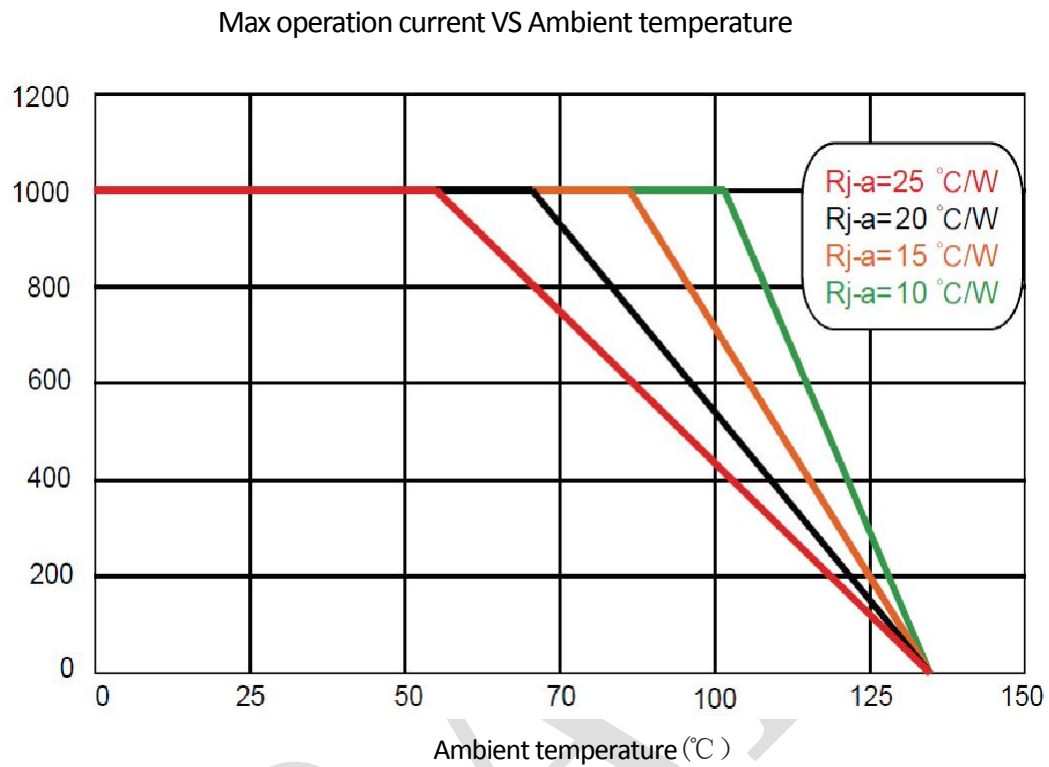
Product characteristic curve



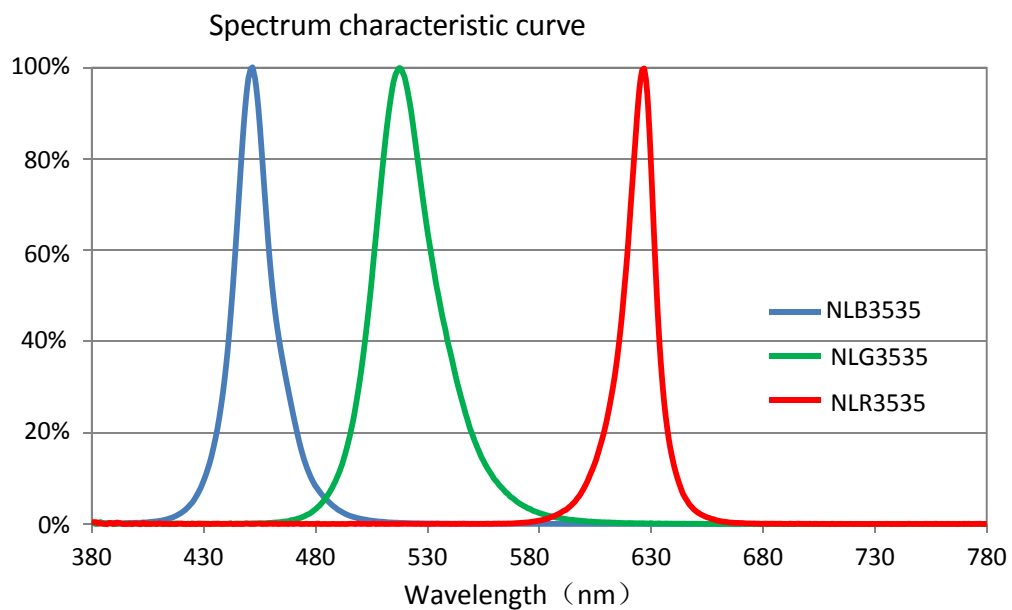
Product characteristic curve



Product characteristic curve

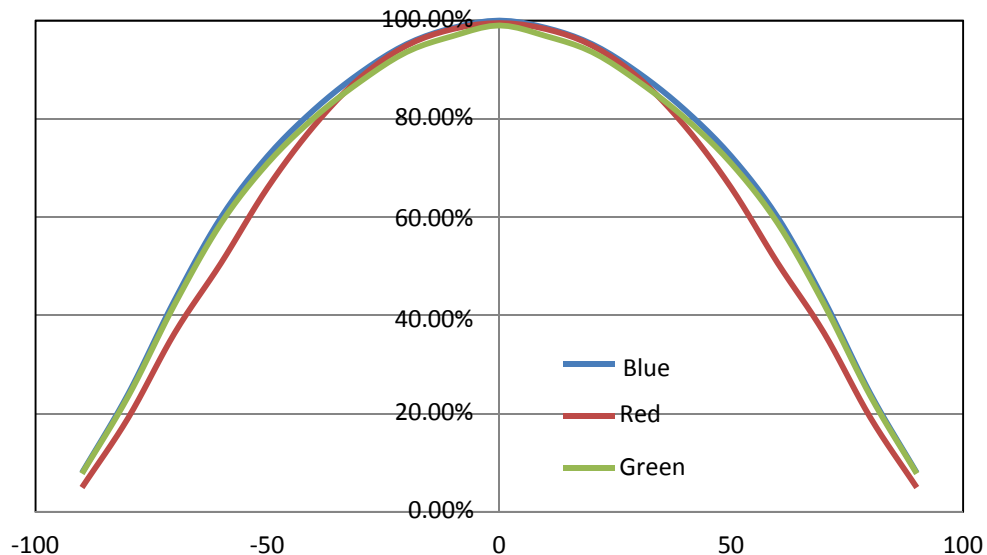


Product characteristic curve

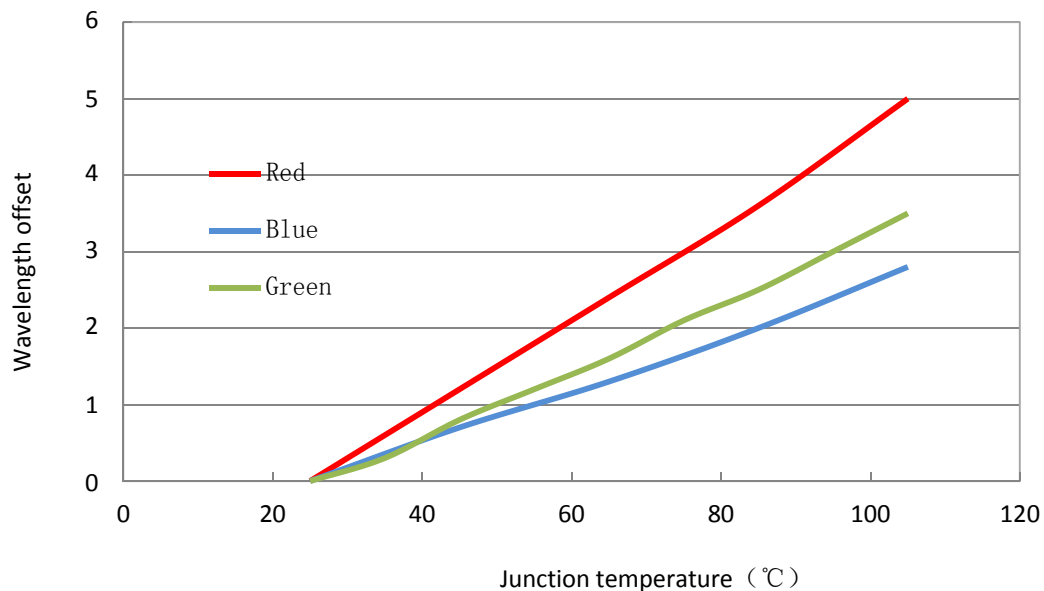


Product characteristic curve

Relative luminous intensity VS Angle



Wavelength offset VS Junction temperature



Product name description:

NLR3535AV1-ACN3R1

Production name

Version

Test current

A: 350mA

Wavelength spec.

Flux spec.

Voltage spec.

Voltage specification

Color	Voltage	Min (V)	Max (V)
Red (NLR)	B	1.75	2
	C	2	2.25
	D	2.25	2.5
Green (NLG)	E	2.5	2.75
	F	2.75	3
	G	3	3.25
Blue (NLB)	H	3.25	3.5
	F	2.75	3
	G	3	3.25
	H	3.25	3.5

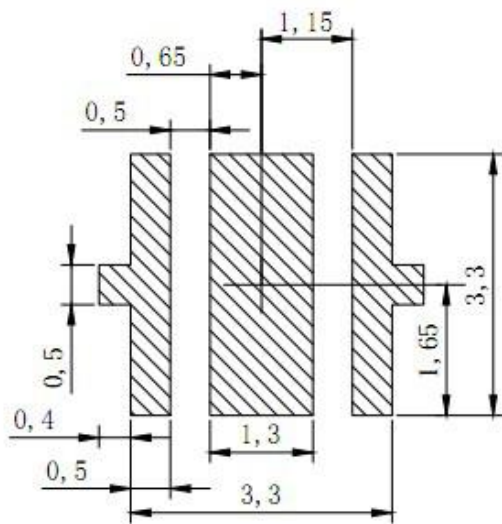
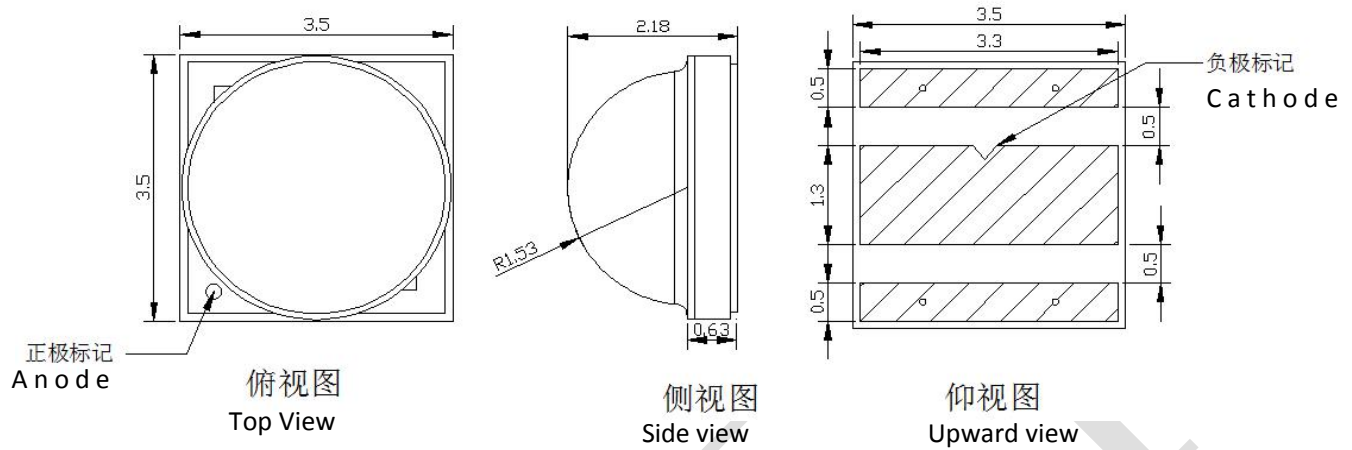
Flux specification

Color	Flux	Min (lm)	Max (lm)
Red (NLR)	N3	56.8	62
	N4	62	67.2
	P2	67.2	73.9
	P3	73.9	80.6
	P4	80.6	87.4
	Q2	87.4	93.9
Green (NLG)	Q3	93.9	100
	S2	148	156
	S3	156	164
	S4	164	172
	S5	172	182
	S6	182	200
Blue (NLB)	L1	18	23
	L2	23	28
	L3	28	33

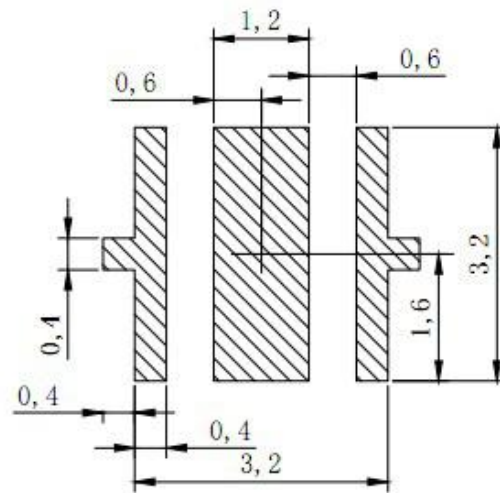
Wavelength Specification

Color	Wavelength Kit	Wavelength (nm)
Red (NLR)	R1	615~620
	R2	620~625
	R3	625~630
Green (NLG)	G2	520~525
	G3	525~530
	G4	530~535
Blue (NLB)	B1	450~455
	B2	455~460
	B3	460~465

Mechanical Dimensions:

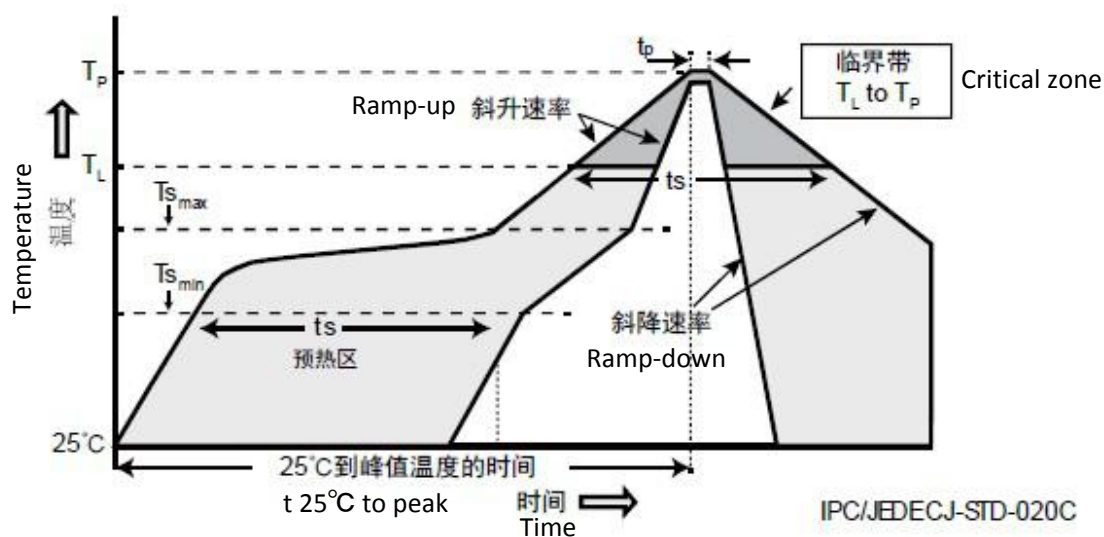
Unit: (mm) Tolerance: ± 0.1 

Recommended PCB Solder Pad



Recommended Stencils Pattern

Recommended Reflow Profile Curve



Profile feature	Lead-Based Solder	Lead-Free Solder
Ramp-up rate (T_{s_max} to T_p)	3°C/s Max	3°C/s Max
Preheat temperature min (T_{s_min})	100°C	150°C
Preheat temperature max (T_{s_max})	150°C	200°C
Preheat time (T_{s_min} to T_{s_max})	60-120s	60-180s
Time maintain above: temperature (T_L)	183°C	217°C
Time maintain above: time (t_L)	60-150s	60-150s
Peak/classification temperature (T_p)	215°C	260°C
Time within 5°C of peak temperature (t_p)	10-30s	20-40s
Ramp-Down (T_p to T_L)	6°C/s Max	6°C/s Max
Time 25°C to peak temperature	6min Max	8min Max

Notes:

- 1.the temperature distribution feature refer to IPC/JEDECJ-STD-020C.
- 2.Moisture sensitive Level 1 (MSL1)。

Tape and Reel Dimensions:

1000pcs/reel

Unit: mm

